AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1.(Currently Amended) An ADSL modem apparatus, comprising:

an exchange unit that transmits and receives a REVERB signal according to one of [[the]] ITU-T standard G.992.1 and G.992.2; and

an estimation unit that estimates a communication distance to an opposing ADSL modem apparatus ~~according to~~ based upon a reception level of the REVERB signal.

2.(Currently Amended) The ADSL modem apparatus according to claim 1, wherein said estimation unit estimates the communication distance to the opposing ADSL modem apparatus by comparing reception levels of two carriers, the two carriers being selected from a plurality of carriers that configure the REVERB signal.

3.(Currently Amended) The ADSL modem apparatus according to claim 1, further comprising:

a communication unit that communicates by concentrating a signal energy into a low frequency band, the signal energy being assigned to a transmission signal according to the communication distance estimated by said estimation unit.

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4.(Currently Amended) The ADSL modem apparatus according to claim 3, wherein said communication unit minimizes [[the]] a signal energy assigned to a high frequency band and increases the signal energy assigned to the low frequency band [[,]] when the communication distance to the opposing ADSL modem apparatus is increased.

5.(Original) The ADSL modem apparatus according to claim 1, wherein the ADSL modem apparatus is located at a remote side, and wherein the communication distance between the remote side ADSL modem apparatus and a center side ADSL modem apparatus is estimated.

6.(Original) The ADSL modem apparatus according to claim 1, wherein the ADSL modem apparatus is located at a center side, and wherein the communication distance between the center side ADSL modem apparatus and a remote side ADSL modem apparatus is estimated.

7.(Currently Amended) A communication method for an ADSL modem apparatus, ~~the method~~ comprising:

receiving a REVERB signal according to one of [[the]] ITU-T standard G.992.1 and G.992.2;

estimating a communication distance to an opposing ADSL modem apparatus ~~according to~~ based upon a reception level of the REVERB signal; and

concentrating a signal energy into a low frequency band, the signal energy being assigned to a transmission signal according to the estimated communication distance.

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8.(Currently Amended) The communication method for an ADSL modem apparatus according to claim 7, ~~the method~~ further comprising:

minimizing [[the]] a̲ signal energy assigned to a high frequency band and increasing the signal energy assigned to the low frequency band [[,]] when the communication distance to the opposing ADSL modem apparatus is increased.

9.(New) A modem apparatus, comprising:

an exchanger that transmits a REVERB signal as part of a modem training signal; and

an estimator that estimates a distance between an opposing modem apparatus and the modem apparatus according to a reception level of the REVERB signal.

10.(New) The modem apparatus of claim 9, wherein said estimator estimates the distance to the opposing ADSL modem apparatus by comparing reception levels of two carriers.

11.(New) The modem apparatus of claim 10, wherein the two carriers are selected from a plurality of carriers that configure the REVERB signal.